



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,077	08/06/2003	Daniel Paul Beaman	AUS920030462US1	7219
35525	7590	01/07/2005	EXAMINER	
IBM CORP (YA)			CHAN, EMILY Y	
C/O YEE & ASSOCIATES PC			ART UNIT	
P.O. BOX 802333			PAPER NUMBER	
DALLAS, TX 75380			2829	

DATE MAILED: 01/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/635,077		BEAMAN ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Emily Y Chan		2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 14-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

Claims 1-13 are presented for examination.

The disclosure is objected to because of the following informalities:

Claim 12 is recited to dependent on claim 12 which is unclear. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-5, 7-9 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaasch et al (439) in view of Kawaguchi et al, U.S. Pat. No. 6,762,616 (Kawaguchi et al '616) or Lutz et al, U S pat. No. 6,771,086, (Lutz et al '086).

1. Gaasch et al (439) was discussed in paragraphs 1-4 of the previous office action dated on 9-02-04.

Gaasch et al (439) do not disclose : (1) an enclosure and a step of enclosing the integrated circuit, the cold plate, and the at least one heater, and (2) a dry gas and the step of injecting the dry gas into the enclosure for maintaining a particular relative humidity in the enclosure to prevent condensation on surfaces within the enclosure as amended in claims 1 and 7 of the instant invention.

Kawaguchi et al ('002) disclose a probe system (see Fig. 1) and particularly teach an enclosure (10) for receiving an integrated circuit to be tested and a dry gas

Art Unit: 2829

(see Col. 6, lines 58-59) being injected into the enclosure for maintaining a particular relative humidity in the enclosure to prevent condensation on surfaces within the enclosure (10) (see Col. 6, lines 7-9).

Lutz et al ('086) disclose semiconductor wafer testing including a wafer chuck for heating and cooling a device under test (DUT, see fig. 1) and particularly teach an enclosure (128) for enclosing the DUT, a cold plate (110) and at least one heater (102) and a dry gas (130) for maintaining a particular relative humidity in the enclosure (128) to prevent condensation on surfaces within the enclosure (see Col. 4, lines 10-13).

It would have been obvious to one of ordinary skilled in the art at the time the claimed invention was made to incorporate Kawaguchi et al ('002) or Lutz et al (086) 's enclosure and dry gas into Gaasch et al (439) 's testing system so that Gaasch et al (439) 's integrated circuit, the cold plate and the heater are enclosed with the dry gas being injected into the enclosure for the expected benefit of preventing dew condensation while maintaining cleanliness in a probe unite and capable of reducing production costs as disclosed by Kawaguchi et al ('002) (see Col. 2, lines 3-5) or for rapidly heating and cooling a device under test that is simple and inexpensive to manufacture and operate as disclosed by Lutz et al (086) (see Col.1, last two lines and Col. 2, lines 2-3).

2. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaasch et al (439) in view of Kawaguchi et al ('002) or Lutz et al (086) and further in view of (Hafer ('556).

Gaasch et al (439) in view of Kawaguchi et al ('002) or Lutz et al ('086) do not disclose a temperature control of the device under test (DUT 102) is accomplished on a coarse level and on a fine level as claimed.

However, Hafer ('556) would be further applied to the claimed feature for the same reason as stated in paragraph 6 of the previous office action dated on 9-02-04.

3 Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaasch et al (439) in view of Kawaguchi et al ('002) or Lutz et al ('086) and further in view of Kainuma et al ('319).

Gaasch et al (439) in view of Kawaguchi et al ('002) or Lutz et al ('086) do not disclose a chilled fluid pipes being covered with insulation such that condensation does not form on the pipes as claimed.

However, Kawaguchi et al ('002) would be further applied to the claimed feature for the same reason as stated in paragraph 6 of the previous office action dated on 9-02-04

### ***Response to Arguments***

Applicant's arguments filed on 12-9-04 have been fully considered but they are not persuasive. The applicants have argued that for the amended independent claims 1 and 7, the reference of (Gaasch et al (439) does not teach an enclosure enclosing the integrated circuit, the cold plate and the at least one heater and dry gas injected into the enclosure. However, these features are taught by Kawaguchi et al ('002) or by Lutz et al ('086) for the reason stated above (see paragraph 1 above).

**THIS ACTION IS MADE FINAL**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Conclusion***

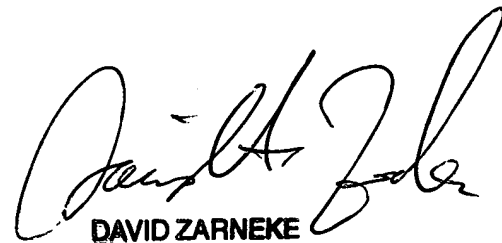
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily Y Chan whose telephone number is 571-272-1956. The examiner can normally be reached on 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 571-272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2829

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EC  
12-28-04

  
DAVID ZARNEKE  
PRIMARY EXAMINER  
1/4/05